



LED
Catalogue

2019-2021



more than light

PHILOSOPHY

1

UPHOLD FAIRNESS

2

DEDICATE TO QUALITY



3

HONEST AND PUNCTUAL

4

WORK TOGETHER AS A TEAM

VISION

To be the leading total lighting solution provider in ASEAN.

MISSION

01

DIVERSE PRODUCTS

Offer diverse and complete range of lighting products to meet every sector's requirement.

02

WELL-COVERED NETWORK

Establish well-covered marketing networks accessible to various group of customers.

03

FULLY INTEGRATED SERVICES

Provide fully integrated services for customers' advantage.

04

HIGH STANDARD MANUFACTURING

Establish high standard facilities with modern and efficient manufacturing process to respond to the market requirement.

05

MODERN INNOVATION

Establish Lighting Innovation Center to proactively innovate and develop new products to meet market requirement and establish a world class testing laboratory to facilitate new products development and innovation.



more than light



2536

Started with 25 million Baht registered capital and acquired the business from Yong Enterprise Ltd. Part., a company marketing fluorescent luminaire to electrical contractors. Expanded the business to cover government agencies and has become agents for many world-class Lighting manufacturers.

2542

Strengthen the company competitiveness by acquiring T.S. Trunking Co. Ltd. (name has now been changed to L&E Manufacturing Co. Ltd.) which manufactures whole range of fluorescent lighting luminaries and trunking products. Started to expand to export market to benefit from the weak Baht at that time.

2547

Increased registered capital to 137.50 million Baht, became a public company and listed in the Stock Exchange of Thailand



2537-2541

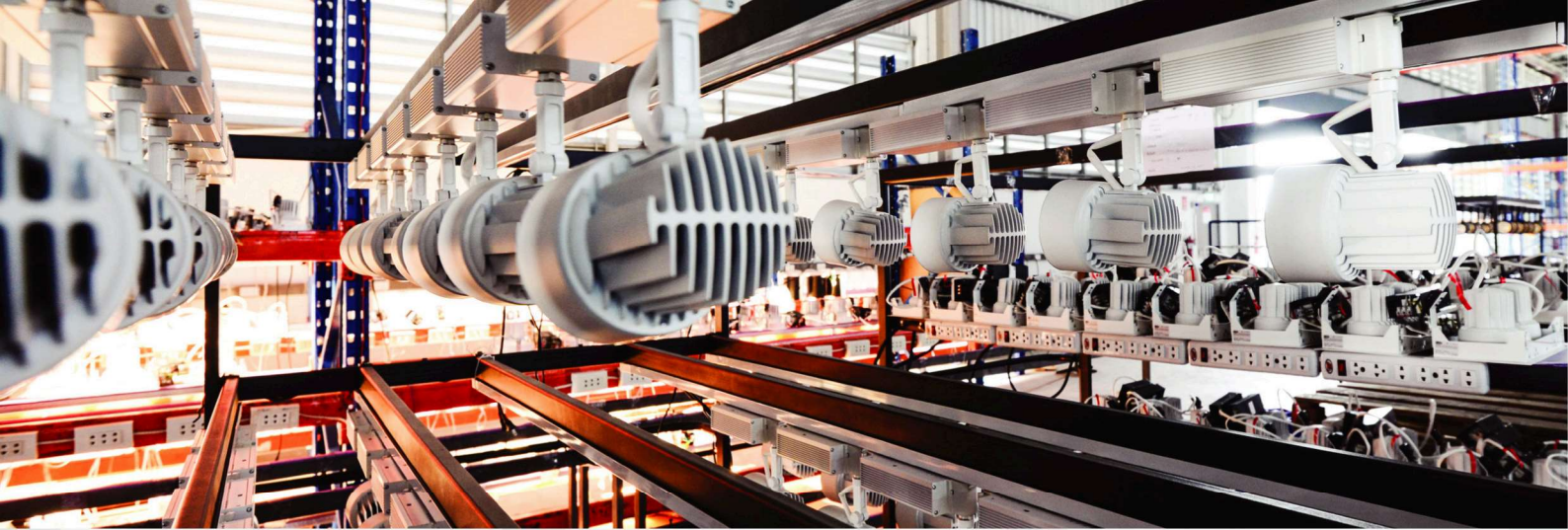
2543-2546

2548

Expanded business by offering diverse range of lighting products. Provided lighting design and recommended proper use of lighting products to provide better value to customers. Expanded marketing network to cover project and wholesale activities.

Expanded business to cover modern trade market and included extensive range of decorative lighting products for residential. Established the Lighting Application Center for demonstration to customers how lighting products can be effectively applied for various applications. Developed and improved MIS and logistics system so that the company can provide faster and better services to customers.

Expanded manufacturing facilities to enable the company to manufacture whole range of indoor and outdoor lighting luminaries. Established representative office in Vietnam.



2549

Granted 5 years corporate income tax holiday by Board of Investment for the factory expansion and manufacturing modernization of the company to improve productivity and reduce production cost.

2551

Granted Top Corporate Governance Awards,mai from Stock Exchange of Thailand.

2553

Granted IEC/ISO 17025 accreditation for lighting luminaries laboratory and ISO 9001:2008 accreditation for lighting luminaries manufacturing.
Granted Top Corporate Governance Awards,mai from Stock Exchange of Thailand

7

2550

Increased registered capital to 305.70 million Baht and established lighting luminaire laboratory for research and develop of lighting products as well as product quality test to ensure that products delivered to customers have good quality and meet standard.

8

9

2552

Established Lighting Solution Center, the showroom that completed with diverse range of lighting products for various life-styles, experienced lighting designers to provide recommendation and lighting design to customers including lighting showcases for customers to experience light effect, to expand marketing channel to retail customers.

10

11

2554

Established L&E Solid State Co. Ltd. to manufacture LED products which is the first Thai factory manufacturing LED lamps for lighting.

12

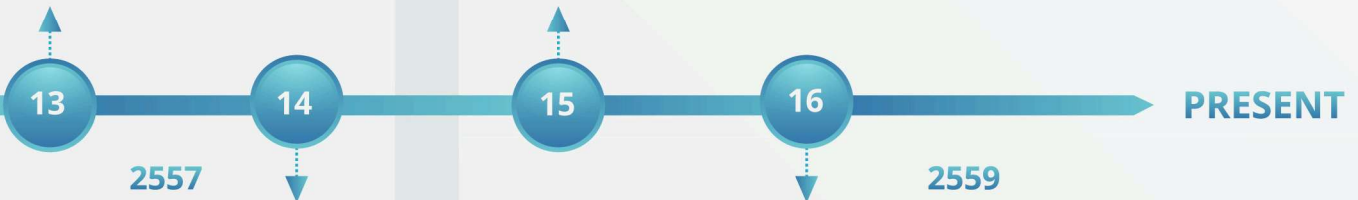


2555-2556

Constantly develop LED products and launch them into the market and expand business into AEC market. Create slogan "L&E more than...light" for communication to the market.

2558

Opened new manufacturing factories and warehouses at Ladloomkaew district, Pathumtani province, total space 80,000 SQM. comprised of : Warehouse and distribution center, total space 16,000 SQM. Assembly factory total space 5,800 SQM. LED lamps, LED components and certain LED luminaires manufacturing. factories under the subsidiary : L&E Solid State Co.,Ltd., total space 8,500 SQM. lighting luminaires and lighting poles manufacturing. factories under the subsidiary : L&E Manufacturing Co.,Ltd., total space 7,600 SQM. Established L&E Myanmar Co.,Ltd. a subsidiary in Yangon, The Republic of the Union of Myanmar.



Penetrated into the consumer market by advertising it's LED lamps for the first time in the television media and other media. Increased registered capital to 494.2 million Baht. Reduced the company's PAR value from 5 Baht to 1 Baht. shift the transaction of the company's share from mai market to SET market. Opened an additional showroom, Lighting Solution Center on Ratchaprek road.

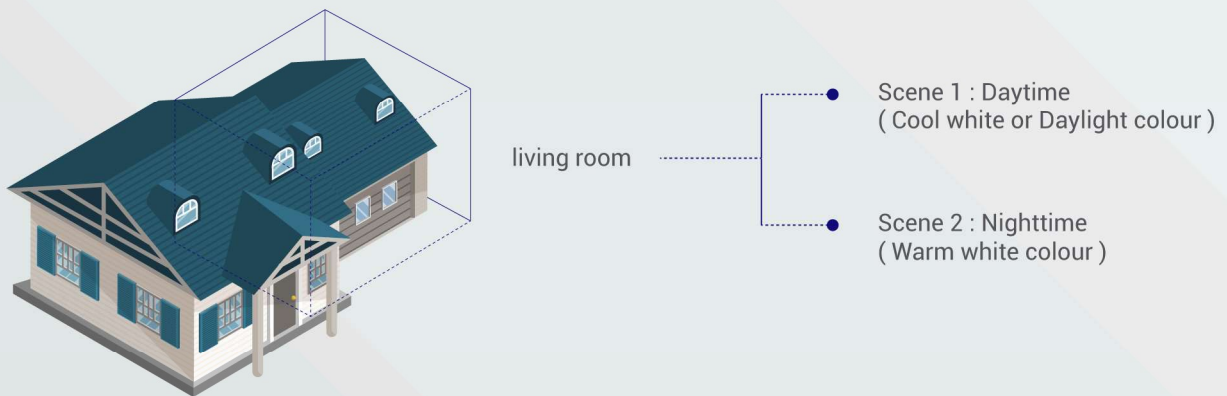
- Established a wholly-own subsidiary, the Lighting & Equipment (Vietnam) Co., Ltd. In Dong Nai, Vietnam with the intention to import lighting product from Head Office for resale in Vietnamese market, and to manufacture lighting products for sale in Vietnamese market as well as for sale to Head Office in Thailand.
- All the 3 manufacturing factories under the company L&E Manufacturing Co., Ltd. (LEM) at Latlumkaeo Pathumthani and L&E Solid State Co., Ltd. (LES) has been assessed and conformed to the environmental system ISO 14001:2015 (TIS 14001-2559)

1. Wise+ LED-Bulb Series

The " **Tunable white LED-Bulb** " is able to dim up/down brightness and change colour from warm white to daylight (2,700-6,500K), but can not change to RGBW colour. Therefore, our factory has developed a new one which is " **RGBW LED-Bulb** " it add up RGBW colour, this is quite unique for all kind of applications. These 2 items are able to control by mobile phone both of Android or IOS system via bluetooth.

Customer is able to download the Application from Google Play or App store, its name is " **allLight** ". It is a very simple Apps. which you can set up to control by grouping each lamp for each room together such as living room, bedroom, kitchen room, etc. Moreover, you can duplicate all control setting from your default mobile phone to another mobile phone and all control setting can be done by duplicate mobile phone.

Further more, after grouping all lamps each room, you can set up scenery such as living room you may have two options of scenery : scene 1, in the daytime can be set to cool white or daylight, but in the nighttime will be set as warm white.



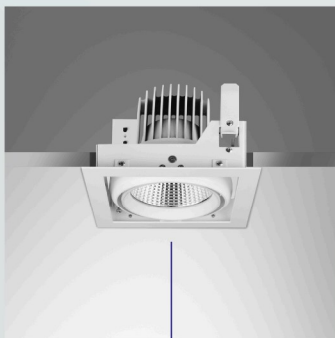
On the above view, these Wise+ LED-Bulb series is an optional lifestyle which is suitable for all people need something easy to control and respond to emotion during the day.

2. Wise+ LED Luminaire Series

The simple luminaire (E27 socket) will get more benefit from Wise+ LED-Bulb series, it changed simple luminaire to " Wise+ LED Luminaire " by add on Wise+ LED-Bulb series into the luminaire.

On the other hand, our factory has developed " Tunable/dimmable LED Module " and " Tunable/dimmable LED driver ". Therefore, for other luminaire such as Linear Luminaire, Downlight, etc. will be integrated with these two equipments in order to transform standard luminaire to Wise+ LED Luminaires. What benefit we will get when install tunable/dimmable LED Module and tunable/dimmable LED driver into standard luminaire. This luminaire is able to control the same function as Wise+ LED-Bulb series.

Standard luminaire



for normal products, you can only selected one color 3000K or 4000K, etc., but by integrated tunable/dimmable LED Module and tunable/dimmable LED driver you can change the color from warm white to daylight (2,700-6,500K) and dim up or dim down the brightness, grouping and scene set up via bluetooth through our application (App) " **allLight** "

● tunable/dimmable LED Module

● tunable/dimmable LED driver



Mobile App



L&E Cloud

L&E Cloud
(Provided registered user and firmware updating)



allLight

Mobile Application

Functionalities

- + Dimmable
- + Tunable (CCT)
- + Grouping
- + Timer
- + Scene setting
- + Sharing
- + 100 lighting products



Bluetooth



Standard luminaire



Wise+ LED-Bulb



Standard luminaire



Wise+ Driver



Wise+ LED-COB



Standard luminaire



Wise+ Driver



Wise+ LED-Linear



Standard luminaire




Wise+ Driver





Wise+ LED-Linear

" allLight " is an L&E 's application for everyone use to control brightness and color changing either from warm white to daylight or RGB (LED-Bulb only). The App. itself is designed for friendly use a little bit complicate at the beginning, but quickly understanding while using. For further information, user manual is available, please contact our company.







Degree of protection

 Completely protected against penetration of dust protected against water jets

The first number : Degree of protected against penetration of solid

- 0 No protection
- 1 Protected against penetration solid bodies of diameter greater than 50 mm.
- 2 Protected against penetration solid bodies of diameter greater than 12 mm.
- 3 Protected against penetration solid bodies of diameter greater than 2.5 mm.
- 4 Protected against penetration solid bodies of diameter greater than 1.0 mm.
-  5 Protected against penetration of dust
-  6 Completely protected against penetration of dust

The second number : Degree of protected against penetration of liquid

- 0 No protection
-  1 Protected against drops of water falling vertically
- 2 Protected against drops of water from angle up to 15 °
-  3 Protected against shower up to 60 °
-  4 Protected against splash water
-  5 Protected against water jets
- 6 Protected against heavy downpours
-  7 Protected against the effects of immersion
-  8 Protected against the effects of submersion

Light distributions

- N : Narrow beam light distribution
- M : Medium beam light distribution
- W : Wide beam light distribution
- S : Symmetrical beam light distribution
- A : Asymmetrical beam light distribution
- FW : Forward throw light distribution
- SL : Streetlight light distribution

Applications

- Highlight certain object
- General lighting
- General lighting
- Required uniformity of light
- Signage
- Car park, parking lots
- Street

LED lamp color



16.7 million color by RGB color additive

Wise+Series



This "APP" is available to download from Google play or App store

L&E 's application use with Wise+LED-Blub and Wise+LED Luminaires (for Wise+Series Models see **Appendix**)

Remark

In Thailand the power system is 220V, 50Hz for other countries may difference. Anyway, due to electronic driver has a wide range of input voltage and frequency Therefore, the common driver may use for different input voltage and frequency, such as 240V, 50Hz. Please feel free to contact our staff for further information in case you use our products out of Thailand.

Insulation class & Standards



Class I luminaire

Luminaires provided with functional insulation, earth wire connection is required.



Class II luminaire

Luminaires provided with double or reinforced insulation, no earth wire connection is required.



Class III luminaire

Luminaires suitable to connect with low voltage supply source.



Thai industrial standard

(according to IEC standard)



International Electrotechnical Commission

(The international standards and conformity assessment body for all fields of electrotechnology)

Particular symbol



Ceiling or wall, cutout for round recessed luminaire



Ceiling or wall, cutout for square recessed luminaire



Vertical adjustment from 0 ° to 30 °



Horizontal adjustment from 0 ° to 358 °



Two axis adjustment from 0 ° to 30 °

Luminaire specifications

LED lifetime

The lifetime of a LED is defined as the time it takes until its light output, or lumen maintenance reach 70% of the initial output

Luminaire life time

Luminaire life time is not the same meaning of LED lifetime, there are many other components that are used included drivers, optic, mechanical fixings and housing. Each of these are also factor in determining the lifetime of luminaire.

Lamp output (lumen)

lumen output ,it is luminous flux come out form LED in every direction and gather in total in term of lumen

Luminare output (lumen)

It is not the same meaning of Lamp output casused of there are many factor when fit LED in luminaire, such as reflector, lens, housing, etc. These parts will effect or distort lumen output.

Product range of LED L&E luminaires are divided into 2 categories.
Each category use different LED light sources.

1. Empty luminaires

It is suitable to use with replacement LED lamps as of easy maintenance and installation, but not suitable for some application because its shape can not be changed (standard shape).

The most popular LED light sources for Empty luminaires are as follows:

- **LED BULB** is suitable for indoor luminaires and, some kind of landscape luminaires
- **LED MR16** is suitable for small indoor luminaires or some kind of landscape luminaires (need compatibility driver connect between luminaire and LED-MR16)
- **LED Candle** is suitable for chandelier, pendant, wall mount, floor, table luminaires, etc.
- **LED PAR (16/20/30/38)** can be used for both of indoor and outdoor luminaires, but for outdoor applications please make sure that the lamps can be used.
- **LED-T8**, it become more and more popular to replace T5/T8 fluorescent lamps because low power consumption and low cost as well, but same lumen output as fluorescent lamps. This lamp easy to replace with existing conventional recessed or surface office or industrial luminaires, just replace it (no need to use existing ballast). Anyway, this kind of lamp has different wiring connection. Improper wiring connection may cause problem.

Warning

Please be noted that for the above mentioned lamps, most of them is recommended to use with indoor luminaires except some items identified that can be used for outdoor applications, but do not recommend to use with totally enclosed luminaires (except some luminaire has enough space for adequate heat dissipation)



2. Completed set luminaires

Driver and LED light source integrated in the luminaires.

The LED light source for completed set luminaires are divided by 2 categories.

- **LED-Module/LED-SMD**, it has various shape such as square, circular, rectangular, etc. Moreover, size and shape can be made according to luminaire's supplier. Therefore, luminaire 's supplier will design their own designed luminaire in various shape to suit all kind of lighting applications.
- **LED-COB**, it is small size light source, but very powerful so that can be used with small luminaire, but provide high lumen output. For some indoor lighting applications, LED-COB can provide various of light distribution such as very narrow beam, narrow beam, wide beam, etc.

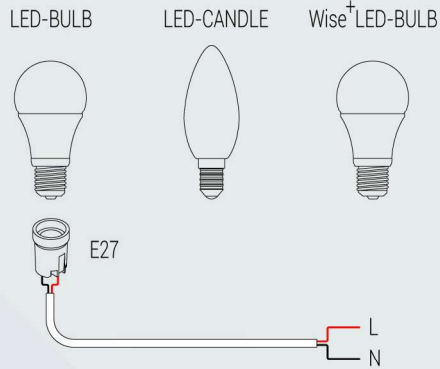


Both of LED-Module and LED-COB can be combined with reflector or lens in order to get different light distribution such as wall washer lighting effect, asymmetrical light distribution, streetlight light distribution, etc.

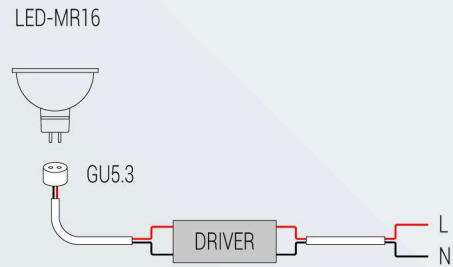
WIRING

Diagram

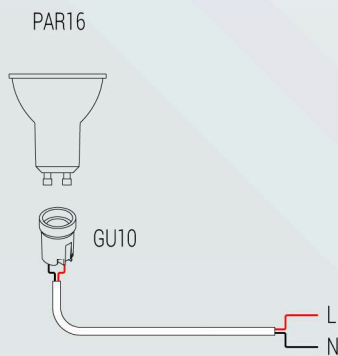
LED-BULB



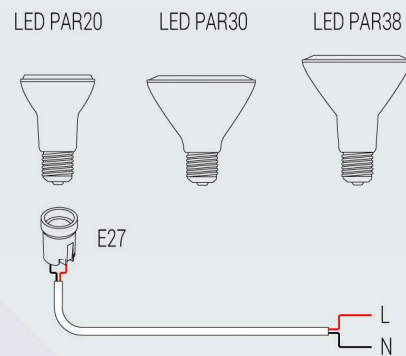
LED-MR16



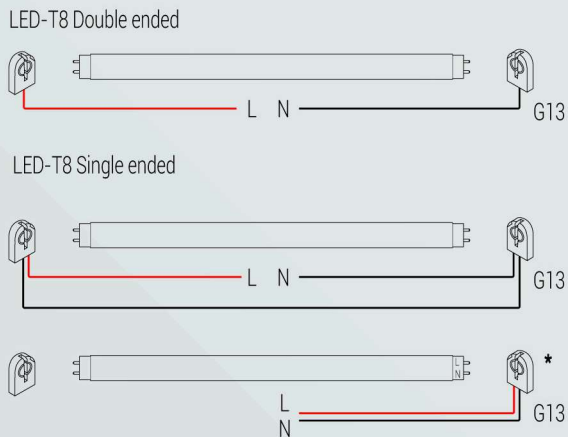
LED PAR16



LED PAR20/30/38



LED-T8

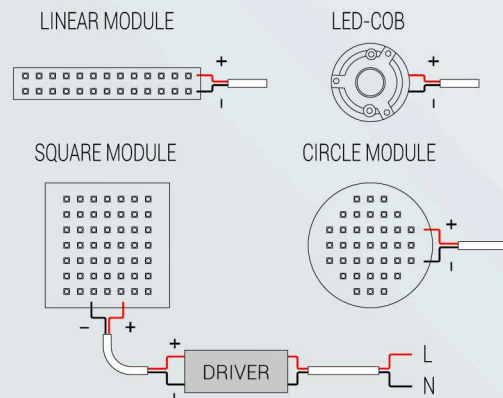


* Please make sure to put the lamp on the right side (L, N)

Remark

In Thailand the power system is 220V, 50Hz for other countries may difference.

LED-MODULE/LED-COB



Note: Wise+ Series is available as option, please contact our company.

Product category

Product 's Model

Brand name

LED Multi-Recessed Downlight



TIS RSAL150/125

Application

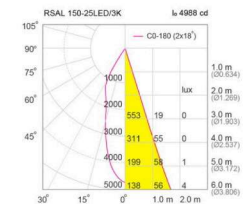
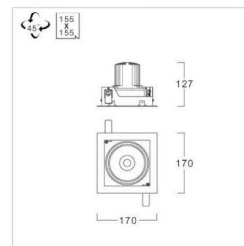
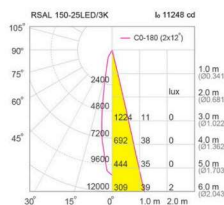
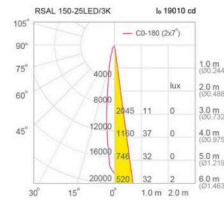
Recessed downlight is designed to use for office buildings, shopping centers, convenience stores, modern trade stores, discount stores, hotels, restaurants, residences, recreation centers, museums, etc.

Specification

Housing	Painted steel frame and Die-cast aluminium lamp head
Finishing	Powder coated in white
Reflector	Anodized aluminium
Mounting	Recessed
Power	25W
Source	LED-COB
Lamp Colour	3000/4000/5000K
Lamp Output	2570/2786/3045 lm
Luminaire Output	14/24/36/45/60 degree
Beam Angle	14/24/36/45/60 degree
Control Gear	Separate driver
Power Supply	220VAC 50Hz
IP Rating	20
Luminaire Lifetime	40,000 hrs.
Equivalent	MH 35W

Ordering Data

Model	Watt
RSAL150/W-1x25LED	25W



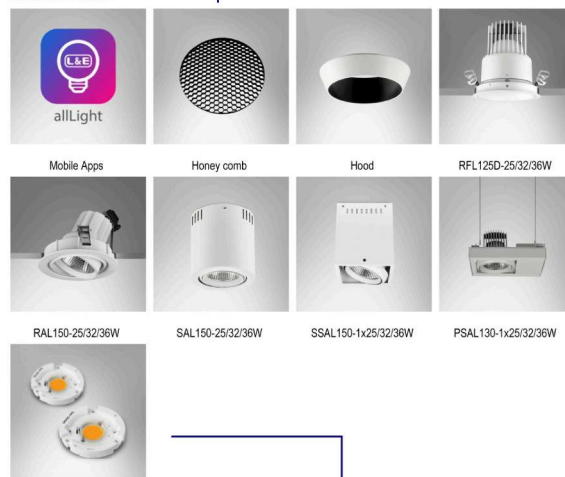
Product information

Typical Product description

Total input power, but for other models (use Replacement Lamp) show range of power.

Accessories

Related Products



Lighting and Equipment Public Company Limited

239

www.lighting.co.th

Dimension in mm.

Option for tunable/dimmable by L&E's Apps. (Wise+Series)

Related products

- Luminaire :**
This example show other luminaires use same heat sink but for other model may show same appearance products, but different size and power.
- LED lamps :**
This section show various type of luminaires which the same LED lamps can be used.

Photometric data (IES file is available)

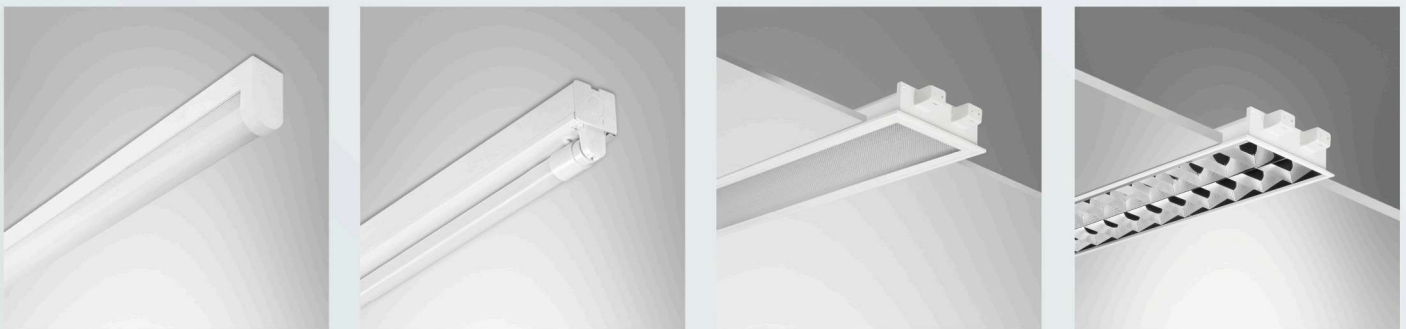
LED light source

Page No.	Typical product description				Additional product description		
	Model	Model's detail	power	lamp type	Color Temperature	Light Distribution	Other
11	LLPDC	/1S/OT	-XX	LED-T8	/XK	N/A	-XXXX Specify by company
239	RSAL150	/W	-1X25	LED	/XK	/XXD	
463	SLL210	/GY	-130	LED	/XK	/XXD	

The above samples identify "typical product description" only (all models identify the same)
Full product description comprised of "Typical product description" + "[Additional product description](#)"

Item 1

If customer would like to order luminaire with LED-T8 [14W,3000K](#),
the full name of "product description is "LLPDC/1S/OT-[14LED-T8/3K](#)-XXXX (if any) "



Item 2

This luminaire has various of power and light distribution, in case customer would like to order
25W, 4000K, 24 degree light distribution
Full name of Product description is "RSAL150/W-1X[25LED/4K/24D](#)-XXXX (if any) "



Item 3

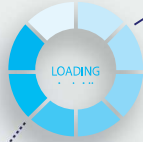
This luminaire has various of power and light distribution, in case customer would like to order
130W, 5700K, SL6 light distribution
Full name of Product description is "SLL210/GY-[130LED/5.7K/SL6](#)-XXXX (if any) "



As the above view, customer may check with each model specification what power, colour temperature and light distribution is need, by add up additional product description with typical product description. Customer will get full name of product description for ordering.

SHORTCUT

to each product category



Click here ▶

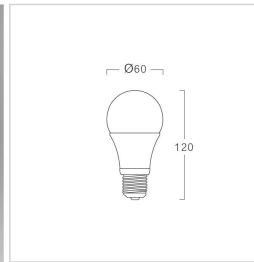


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(Only for first page of each Product category)

LED Lamp



TIS LED-BULB/WISE PLUS TUNABLE



Specification

Housing Aluminium inside cover with plastic
Description Do not use with enclosed luminaires
 Operating temperature 0 to 40 degree
Body Colour White
Technical Data
Power 9 W
 Power Factor >0.9
Source LED-SMD
Lamp Holder E27
Lamp Colour 2700-6500K

อลูมิเนียมพ่นด้วยพลาสติก
 ห้ามใช้กับโคมไฟแบบปิด
 ใช้งานได้ 0 ถึง 40 องศา
 สีขาว
Note
 Price in Thai Baht
 Lamp : Price for lamp

LED-BULB/WISE PLUS TUNABLE
 L&E#LED-BULB-Tunable-800lm/9W/E27

Price
 ราคา
 833



CO

Wise+Series
Light sources
W1-10

Indoor lighting
11-411

Special lighting
412-427

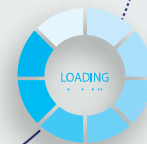
Outdoor lighting
428-530

- Wise+Series**
 W1 LED-BULB/TUNABLE
 W2 LED-BULB/RGBW
LED Module/Lamps
 1 LED Module
 2-10 LED lamps

- General Lighting (Fluorescent)**
 11-23 Barren
 24-45 Surface Linear
 46-47 High bay
 48-78 Recessed Linear
Downlights
 79-191 Recessed Downlight
 192-207 Recessed Square Downlight
 208-212 Recessed Multi Square Downlight
 273-291 IP Recessed Downlight
 292-302 Surface Downlight
 303-322 Surface Square Downlight
 Surface Multi Square Downlight
 323-324 IP Surface Downlight
Spot/Track light
 325-370 Spot/Track light
 371-372 Lighting track
Pendant/Wall Table/Floor lamps
 373-398 Pendant
 399-400 Wall Mount
 401 Table lamp
 402 Floor Lamp
Low/High Bay
 403-404 Low Bay
 405-411 High bay

- Emergency/Exit sign**
 Emergency/Exit sign
Clean room/Cold room
Weatherproof
 416-424 Clean room
 425 Cold room
 426-427 Weatherproof

- Floodlight/Accent**
 428-456 Floodlight
 457-458 Accent
Canopy/Streetlight
Area light
 459-460 Canopy
 461-466 Streetlight
 467 Area light
 468-469 Lighting Poles
Underwater
Inground
 470-473 Underwater
 474-480 Inground
Ballard/Wall mount
Post top
 481-497 Ballard
 498-518 Wall Mount
 519-530 Post top



Wise+Series

Click here ▶

(Go to first page of each product category.)

CONTENT



Wise⁺Series Light sources W1-10

- Wise⁺Series**
W1 LED-BULB/TUNABLE
W2 LED-BULB/RGBW
LED Module/Lamps
1 LED Module
2-10 LED lamps

Indoor lighting 11-411

- General Lighting (Flourescent)**
11-23 Batten
24-45 Surface Linear
46-47 High bay
48-78 Recessed Linear
Downlights
79-191 Recessed Downlight
192-207 Recessed Square Downlight
208-272 Recessed Multi Square Downlight
273-291 IP Recessed Downlight
292-302 Surface Downlight
303-322 Surface Square Downlight
Surface Multi Square Downlight
323-324 IP Surface Downlight
Spot/Track light
325-370 Spot/Track light
371-372 Lighting track
Pendant/Wall Table/Floor lamps
373-398 Pendant
399-400 Wall Mount
401 Table lamp
402 Floor Lamp
Low/High Bay
403-404 Low Bay
405-411 High bay

Special lighting 412-427

- Emergency/Exit sign**
412-415 Emergency/Exit sign
Clean room/Cold room Wheatherproof
416-424 Clean room
425 Cold room
426-427 Weatherproof

Outdoor lighting 428-530

- Floodlight/Accent**
428-456 Floodlight
457-458 Accent
Canopy/Streetlight Area light
459-460 Canopy
461-466 Streetlight
467 Area light
468-469 Lighting Poles
Underwater Inground
470-473 Underwater
474-480 Inground
Bollard/Wall mount Post top
481-497 Bollard
498-518 Wall Mount
519-530 Post top